

# SYSTEM AND METHOD FOR A FLAMELESS TRACER/MARKER UTILIZING AN ELECTRONIC LIGHT SOURCE

## Abstract

An electronic light source system is employed to create a flameless tracer for a munitions projectile. The electronic light source system may be positioned in various locations and combinations of locations on a projectile (e.g., front, back, side, etc.) to enhance visibility of the projectile during flight. The electronic light source system provides a light source on the projectile that is visible to an observer at various viewing angles throughout the projectile flight without the environmental or safety issues presented by tracers using pyrotechnic materials. After assembly, the present system is encapsulated in glass or clear plastic to G-harden the present system, enabling the present system to sustain the large loads and stresses induced by gun launch. The present system may comprise a variety of light sources such as, for example, lasers, high output light-emitting diodes (LEDs), strobe lights, etc. The present system is capable of flashing the light sources at a variety of frequencies (e.g., 5 Hz, 20 Hz, etc.) to further attract the

human eye. In addition, the present system presents the substantial benefit of being able to project light at various wavelengths outside the visible spectrum.